

Patent Claims

1. Method for the production of a locally limited diffusion layer on a metal component by alitiation, siliconization and/or chromation, **characterized in that** said method comprises at least the following steps:
 - application of a paste containing Cr, Si and/or Al, and containing activators, to the areas of the metal component to be coated;
 - solidification of the paste to form a donor pack;
 - covering of the regions, which are not to be coated and are adjacent to the donor pack, with a diffusion-blocking powder pack;
 - heating to a temperature above 900°C in order to carry out the alitiation, siliconization and/or chromation.
2. Method as in Claim 1, **characterized in that** the metal component is covered before the application of the paste, at least in the regions to be coated, with a porous separating layer containing Al_2O_3 .
3. Method as in Claim 1 or 2, **characterized in that** the diffusion-blocking powder pack contains metal powder having a similar or the same composition as the metal component to be coated.
4. Method as in Claim 3, **characterized in that** the diffusion-blocking powder pack consists of Ni or of an Ni alloy.
5. Method as in Claim 3, **characterized in that** the diffusion-blocking powder pack contains activators.
6. Method as in one of the previous Claims, **characterized in that** the diffusion-blocking powder pack, the paste and/or the donor pack contains activators in an amount of 0.2 to 5 wt.%.

7. Method as in one of the previous Claims, **characterized in that** the activators essentially are NH_4F , NH_4Cl and/or AlF_3 .
8. Use of a method in accordance with one of the previous Claims in the production of turbine rotors.